

NASA DEVELOP – 2021 Fall Potential Project List

NOTE: These project ideas are **tentative** and **subject to change**. The number of projects listed does not necessarily reflect the number of projects conducted at a given node. Expect that each node will conduct 1-3 projects for the 2021 fall virtual term. This list may be updated throughout the application period.

ARC: California – Ames

- ▶ California Health & Air Quality: Using Remote Sensing to Detect the Frequency and Drivers of Red Tide Blooms in California

AZ: Arizona – Tempe

- ▶ Hawai'i Island Urban Development: Establishing Sea Surface Height and a Coastal Habitat Vulnerability Index for Adaptation and Mitigation Planning
- ▶ Paso del Norte Health & Air Quality: Using NASA Earth Observations to Identify Areas of Extreme Urban Heat and Model Urban Cooling Interventions for Urban Planning and Climate Adaptation in El Paso, TX and Ciudad Juárez, Mexico

CO: Colorado – Fort Collins

- ▶ Northeast US Ecological Forecasting: Modeling Novel Invasive Plant Habitat and Predicting Spread to Inform Treatment Efforts
- ▶ Southern Wyoming Disasters: Native and Invasive Vegetation Monitoring to Support Post-fire Management

GA: Georgia – Athens

- ▶ Carolina Sandhills Ecological Forecasting: Modeling Venus Flytrap Habitat to Inform Conservation Efforts and Identify Sites for Seedbanking and Species Reintroduction
- ▶ Southeast Food Security & Agriculture: Assessing Threats to Forest Health of Family-run Forests to Support Timber Farming and Forest Conservation Decisions

GSFC: Maryland – Goddard

- ▶ Maine Ecological Forecasting: Using NASA Earth Observations to Assess Federally Endangered Atlantic Salmon Habitat
- ▶ Western Montana Ecological Forecasting II: Enhancing Habitat Suitability Modeling of Mustelid Species and Contaminant Monitoring Using NASA Earth Observations

ID: Idaho – Pocatello

- ▶ Yellowstone Disasters: Monitoring Vegetation Regrowth and Snowpack Changes After Wildfire
- ▶ Idaho Transportation & Infrastructure: Assessing Power Line Proximity to Areas Sensitive to Wildfire Hazard

JPL: California – JPL

- ▶ Maya Forest Water Resources II: Mapping Inundation and Wetland Extent Below the Forest Canopy in the Maya Tri-National Forest
- ▶ Oklahoma Health & Air Quality: Using NASA Earth Observations to Improve Accuracy of Oil and Gas Methane Emissions in Oklahoma

LaRC: Virginia – Langley

- ▶ Southeast Michigan Health & Air Quality: Measuring Methane Release from Landfills and Gas Lines in Southeast Michigan
- ▶ Washington DC Energy: Estimating Solar Potential Using NASA POWER Data to Inform Renewable Energy Policy in Washington DC
- ▶ Tonlé Sap Food Security & Agriculture III: Evaluating Changes in Ecosystem Vitality and Freshwater Health in the Tonlé Sap Basin using Remotely Sensed Data

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MA: Massachusetts – Boston

- ▶ *Fire Island National Seashore Water Resources: Assessing Turbidity and Harmful Algal Bloom Changes from Tidal Inlet Formation Following Hurricane Sandy Using Satellite Data*

MSFC: Alabama – Marshall

- ▶ *St. Joseph Peninsula Ecological Forecasting: Investigating Suitable Habitat for Imperiled Species to Evaluate and Predict Impacts*
- ▶ *Central America Disasters: Using Earth Observations to Map Flooding for Disaster Response, Mitigation, and Prevention*

NC: North Carolina – NCEI

- ▶ *Midwest Water Resources: Developing an Evapotranspiration Climatology to Support Agriculture and Natural Resource Managers in the Midwest*

BT: Bhutan Special Project – MSFC

- ▶ *Bhutan Food Security & Agriculture: Defining Land Cover Classifications and Creating Data Collection Protocols for Focal Crops in Bhutan*
 - ***Note: This special project is for Bhutanese scholars studying in the United States only***